

hexagonal nurseries. The general, indefinite character of impulsive instincts renders them ineffective unless they receive guidance in detail: they are aroused by memories as well as by sensory impressions : they present themselves in assortments : there arises accordingly a period of hesitation ending in a choice. Directive instincts, on the other hand, act simply and inevitably. Their influence is hardly apparent in man, but it increases as we descend the animal kingdom, until, amongst the lowest organisms, it becomes nearly all-embracing. But in no living organism does its dominion appear to become quite absolute : we may notice signs of hesitation amongst the humblest of microscopic creatures. Instincts, whether impulsive or directive, are inborn, and are part and parcel of an organism. A living creature may, indeed, be defined as a bundle of innate impulses with machinery for putting them into action. This definition, it may be objected, ignores the influence of reason. But reason, as we shall see, is itself developed from an instinct. Obscured though it be by many anomalies, we may discern a tendency towards uniformity in the impulsive instincts of all living organisms, and in the directive instincts of each great class of the animal and vegetable kingdom. This illustrates the solidarity of Life—the fact that all living creatures are, in a degree, blood

relations.

We have seen that impulses are most commonly set free by sensorv impressions or recollections. A newly hatched chicken is stimulated to drink by the touch of water. Acquisitiveness is excited by the sight of money. The sound of music arouses, in many people, a desire to dance, or to